Remarks/Arguments

Objections to Claims 2-7

The Examiner objected to Claims 2-7 because the titles were incorrect. Applicants have amended Claims 2-7 to follow the preamble of Claim 9. Applicants courteously request that the objection be withdrawn.

Claim Rejections under 35 U.S.C. §103 (Obviousness)

The Examiner rejected Claims 2-7 and 9 under 35 USC §103 as being unpatentable over European Patent No. 0544181 (Niesporak) combined with United States Patent No. 5,488,886 (Mohr). Applicants respectfully traverse the rejection.

"To establish a *prima facie* case of obviousness three criteria must be met. First, there must be some suggestion or motivation to modify the reference. Second, the reference(s) must provide a reasonable expectation of success. The third requirement for a *prima facie* case of obviousness is that the reference must teach or suggest all limitations of the claim at issue. *The teaching or suggestion to make the combined combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.*" *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added). Furthermore, "[t]here are three possible sources of motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re* Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). None of three aforementioned sources of motivation are present.

Claim 9

Mohr does not motivate a modification of Niesporak

Claim 9 recites: "a light barrier being arranged parallel to the knife edge and located between the knife and the specimen, the arrangement of the light barrier is such that the relative motion between the knife and the specimen penetrates the light barrier and thereby ascertains a spacing between the knife and the specimen." The Examiner has cited U.S. Patent No. 5,488,886

(Mohr) as providing motivation to replace the limiting device of Niesporak with the light barrier taught by Mohr. The Examiner further asserts that one of ordinary skill in the art would replace a contact sensor with a light barrier to reduce the potential for breakage.

Hence, elements of separate patents cannot be combined when there is no suggestion of such combination in those patents. *Panduit Corp. v. Dennison Manufacturing Co.*, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987). Additionally, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills* 16 U.S.P.Q.2d 1430. The Examiner has provided this motivation without regard to the teachings of the references. Niesporak does not mention any problems with breakage regarding a sensor, or the desirability of using a light sensor. In the field of microtome technology, accuracy of a sensor, not fragility of the sensor, is a concern. That is, as stated in the present specification, the concern is increasing the accuracy of measuring the distance between the specimen and the knife to prevent damage to the knife and specimen. Durability of the sensor is not of primary concern to one of ordinary skill in the field of microtomes.

Moreover, deficiencies of the cited references cannot be remedied by general conclusions about what is "basic knowledge," or "common sense." Id. Indeed, "to imbue one of ordinary skill in the art with knowledge of the invention ... when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id*; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303 (Fed. Cir. 1983). The Examiner has applied impermissible hindsight to provide the motivation to modify Niesporak.

The Examiner has not established the equivalency of contact and light sensors

The Examiner also asserted that one of ordinary skill in the art would consider using a light barrier over a contact sensor because the two sensors are art-recognized equivalents. Relying on equivalence as a rationale to support an obviousness rejection requires that the equivalency be art recognized. MPEP §2144.06. Stating that two components are art-recognized equivalents sets the stage for offering evidence of equivalency, but more is needed than a mere

assertion. The Examiner has failed to substantiate the claim that contact sensors and light barriers are art-recognized equivalents. Equivalency cannot be "based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents." MPEP §2144.06, *In re* Ruff, 256 F.2d 590, 118 USPQ 340 (CCPA 1958).

Mohr's sensors do not measure the distance between the material and the blade

In Fig. 6, Mohr teaches: "The number of passive light barriers represents the distance between the material-contact surface 8a of holdfast beam 8 and the top 1a of the material 1 that is to be cut or between the sharp edge 7a of blade 7 and the surface 3a of bench 3, *which can be exploited to obtain the distance of edge 7a from the top of the material.*" (emphasis added) (Col. 7, lines 34-39). Claim 9 ascertains the spacing between a sample and a knife by the penetration of a light barrier. Mohr by necessity adds an additional step, with a subsequent increase in complexity, to measure distances between material to be cut and a blade.

Mohr is not analogous to Niesporak or the present invention

Before an Examiner can rely on a reference as a basis for an obviousness rejection "the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the invention was concerned." *In re* Oetiker. 977 F.2d 1443 (Fed. Cir. 1986). The Examiner cited Mohr to provide motivation to replace a contact sensor with a light barrier in a microtome. Mohr is not analogous to Niesporak. Mohr teaches a hydraulic, guillotine, bench cutting machine for cutting sheets of material stacked on a bench (Abstract and Figure 1). That is, Mohr is cutting a plurality of longitudinal sheets orthogonal to the face/surface of the sheets. Specifically Mohr teaches moving a guillotine blade to cut fixed, stacked sheets of paper, cardboard, or similar material (col. 5, lines 39-41). Niesporak and the present invention move a very small specimen with respect to a fixed knife to slice off sections of the specimen.

In addition to the difference in cutting operations (chopping sheets versus slicing a cross section from a piece), there are orders of magnitude difference between the sizes of the respective devices taught by Niesporak and Mohr and the stack materials cut by Mohr and the

slices produced by the present invention. For example, the slices are on the order of micrometers and Mohr's stacks are typically measured in feet and inches.

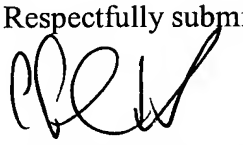
Further, the present invention is using a light barrier to prevent damage to a microtome knife or to a specimen being cut, as well as increasing the precision of the cutting action of the microtome. In contrast, Mohr does not teach, suggest, or motivate using a light barrier to prevent damage to the cutting mechanism or the sample being cut. Neither does Mohr suggest or motivate using a light barrier to increase the precision of the cutting action in a microtome.

For all the reasons presented above, Niesporak fails to form a *prima facie* case of obviousness with respect to Claim 9. Therefore, Claim 9 is patentable over Niesporak. Claims 2-7, dependent from Claim 9, enjoy the same distinction from the cited prior art. Applicants courteously request that the rejection be removed.

Conclusion

Applicant respectfully submits that all pending claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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